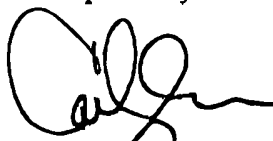


The amendment is consistent with the limitations in the claims of the co-pending application in that a DNA sequence limitation is claimed to a plant violaxanthin de-epoxidase. The informal term "vde" has been removed from the claims, and the claims now emphasize that an "isolated" violaxanthin de-epoxidase encoding sequence is then joined to the heterologous promoter sequence in producing the DNA construction recited by Claim 3.

CONCLUSION

It is respectfully submitted that the instant application is now in condition for allowance and Applicants request timely notice to this effect. The Examiner is invited to contact the undersigned by telephone at (530) 792-2265 if in the opinion of the Examiner it would be useful to the prosecution of this application.

Respectfully submitted,



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Allowed Claims of Co-pending Parent 08/0747,574

1. An isolated DNA sequence encoding plant violaxanthin de-epoxidase.
2. The DNA sequence of Claim 1 wherein said violaxanthin de-epoxidase DNA sequence is joined to a heterologous nucleic acid sequence.
3. A recombinant DNA construct capable of directing the transcription of RNA in a plant cell, wherein said construct comprises in the order of transcription, a plant transcription initiation region, the violaxanthin de-epoxidase encoding sequence of Claim 1, and a transcriptional termination region.
4. The DNA sequence of Claim 1 having at least about 70% sequence identity or greater homology at the DNA level to a sequence selected from the group consisting of the nucleic acid sequences shown in SEQ ID NO 1, SEQ ID NO 2 and SEQ ID NO 3.
5. The DNA sequence of Claim 1, wherein said sequence is selected from the group consisting of the nucleic acid sequences in SEQ ID NO 1, SEQ ID NO 2 and SEQ ID NO 3.
6. The DNA sequence of Claim 1, wherein said sequence encodes at least about the twenty N-terminus amino acids of a protein selected from the group consisting of the plant violaxanthin de-epoxidase proteins in SEQ ID NO 1, SEQ ID NO 2 and SEQ ID NO 3.
7. The DNA sequence of Claim 6, wherein said sequence encodes a plant violaxanthin de-epoxidase protein selected from the group consisting of the proteins in SEQ ID NO 1, SEQ ID NO 2 and SEQ ID NO 3.
8. The DNA sequence of Claim 1, wherein said sequence encodes a protein comprising the amino acids VDALKTCACLLK.

9. A method of modifying the violaxanthin de-epoxidase levels in a plant, said method comprising growing a plant transformed by a construct according to Claim 3.
10. The method of Claim 9 wherein said encoding sequence is in sense orientation.
11. The method of Claim 10 wherein said construct further comprises a plastid translocation sequence.
13. A method of modifying the sensitivity of a transgenic plant to light comprising growing a plant transformed by a construct according to Claim 3.
14. The method of Claim 11 wherein violaxanthin de-epoxidase activity is increased resulting in increased zeaxanthin and antheraxanthin production.
16. The method of Claim 14 wherein said increased zeaxanthin and antheraxanthin levels results in said plant being tolerant of increased light levels, as opposed to a non-transformed control plant of the same type.
18. A transgenic plant with modified sensitivity to light as a consequence of the activity of an introduced construct according to Claim 3.
19. A plant, plant cell or other plant part each comprising a construct according to Claim 3.
20. A plant, plant cell or other plant part each produced by the method of Claim 9.
21. A plant, plant cell or other plant part each produced by the method of Claim 11 wherein flowering of said plant is delayed as compared to flowering in a control plant not produced by said method.

22. A plant, plant cell or other plant part each produced by the method of Claim 11 wherein flowers of said plant are larger as compared to flowers of a control plant not produced by said method.